L 14989-65   EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(1)   Pd-4   AFWL/AEDC(a)/SSD/ASD(a)-5/
ASD(f)-2/ASD(p)-3/AFTC(a)/AFETR/ESD(gs)/ESD(t)

ACCESSION NR: AP5000270   S/0040/64/028/006/0996/1007

AUTHORS: Ryzhov, O. S. (Moscow); Shefter, G. M. (Moscow)

TITLE: On the effect of viscosity and thermal conductivity on the structure of compressible flow

SOURCE: Prikladnaya matematika i mekhanika, v. 28, no. 6, 1964, 996-1007

TOPIC TAGS: compressible gas flow, viscous flow, thermal conductivity, unsteady flow, Navier Stokes equation, wave propagation, transonic flow, asymptotic solution, thermodynamic law

ABSTRACT: The study consists of a two-part investigation of dissipative effects on the structure of compressible gas flow. In part (1), using Navier-Stokes equations and the laws of thermodynamics, asymptotic equations are derived satisfying a flow of the "short wave" type propagation in viscous heat-conducting gas. The flow is assumed to be 2-dimensional and unsteady. A moving system of coordinates is introduced, $x = \xi t$, $y = \eta t$, $t = t$, where

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$$\xi = a_0 (1 + \Delta_0 \delta), \quad \eta = a_0 \theta_0 \vartheta, \quad t = \mu_0 \tau_0 \tau / \rho_0 a_0^2,$$

$$v_x = a_0 M_0 u, \quad v_y = a_0 N_0 v$$

$$p = \rho_0 a_0^2 (p_0 / \rho_0 a_0^2 + M_0 P), \quad \rho = \rho_0 (1 + M_0 R)$$

$$T = T_0 (1 + M_0 \Omega), \quad a = a_0 (1 + M_0 A)],$$

and Δ_0, M_0, N_0 are small compared to unity. Short waves are characterized by the assumption that the magnitude of velocity and flow gradient in the direction of wave propagation exceed those in the transverse direction, or $N_0 \ll M_0$, $\Delta_0 \ll \theta_0$. This leads to the simplified set of equations

$$R = u, \quad P = u, \quad \Omega = \frac{\gamma_0 - 1}{a_0 T_0} u, \quad \frac{N_0}{\Delta_0} \frac{\partial v}{\partial \delta} = \frac{M_0}{\theta_0} \frac{\partial u}{\partial \vartheta}$$

$$\tau \frac{\partial u}{\partial \tau} + \left[\frac{M_0}{\Delta_0} (u + A) - \delta \right] \frac{\partial u}{\partial \delta} - \vartheta \frac{\partial u}{\partial \vartheta} + \frac{1}{2} \frac{N_0}{M_0 \theta_0} \left[\frac{\partial v}{\partial \vartheta} + \frac{(k - 1) v}{\vartheta} \right] -$$

$$- \frac{1}{2\tau_0 \Delta_0^2 \tau} \left[1 + \frac{(\gamma_0 - 1) \varkappa_0}{\mu_0 c_{p_0}} \right] \frac{\partial^2 u}{\partial \delta^2} = 0$$

which are further modified by assuming a perfect gas and

$$\Delta_0 \sim M_0, \quad \frac{N_0 \theta_0}{M_0^2} \sim 1, \quad \tau_0 M_0^2 \sim 1, \quad \frac{N_0}{M_0 \theta_0} \lesssim 1$$

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ACCESSION NR: AP5000270

lead to

$$\frac{\partial u}{\partial \vartheta} = \frac{\partial v}{\partial \delta}, \qquad \tau \frac{\partial u}{\partial \tau} + (m_0 u - \delta)\frac{\partial u}{\partial \delta} - \vartheta \frac{\partial u}{\partial \vartheta} + \frac{1}{2}\left[\frac{\partial v}{\partial \vartheta} + \frac{(k-1)\,v}{\vartheta}\right] -$$

$$- \frac{1}{2\tau}\left(1 + \frac{\gamma_0 - 1}{N_{Pr_0}}\right)\frac{\partial^2 u}{\partial \delta^2} = 0 \qquad \left(N_{Pr} = \frac{\mu c_p}{\varkappa} = \frac{(4/3\lambda + \zeta)\,c_p}{\varkappa}\right).$$

Here, the potential function $\varphi(\delta, \vartheta, \gamma)$ is introduced and a new set of equations is obtained which leads to the asymptotic dimensions for the region where the dissipative effects are significant. In part (2) a steady-state transonic flow is discussed. The investigation considers the dissipative effects on the asymptotic flow curves for profiled and body-of-revolution geometries in a sonic flow at infinity. The equations used are analogous to those of part (1), with the exception that the flow parameters are related to critical conditions or

$$x = \frac{\mu_* \Delta_0}{\rho_* a_*}\,x^\circ, \qquad y = \frac{\mu_* \theta_0}{\rho_* a_*}\,y^\circ, \qquad t = \frac{\mu_* t_0}{\rho_* a_*^2}\,t^\circ .$$

The corresponding flow equations take the form

$$\frac{\partial u}{\partial y} = \frac{\partial v}{\partial x}, \qquad \frac{\partial u}{\partial t} + u\frac{\partial u}{\partial x} - \frac{\partial v}{\partial y} - \frac{(k-1)\,v}{y} - \frac{\partial^2 u}{\partial x^2} = 0 .$$

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L 14989-65
ACCESSION NR: AP5000270

For the steady-state case the potential $\varphi(x,y)$ is given in the form $y^{3n-2} \varphi (x/y^h)$ where n = 4/5 corresponds to a profiled body, and n = 4/7, to a body of revolution. A set of equations is obtained where it is shown that for n = 2/3 the dissipative terms become significant. It is further shown that in the plane case, F. I. Frankl's solution (Issledovaniya po teorii kryvla beskonechnogo razmakha, dvizhushchegosya so skorost'yu zvuka. Dokl. AN SSSR, 1947, t.57, No. 7) describes correctly the transonic flow of ideal gases away from the profiled body. For transonic flow over bodies of revolution, the asymptotic flow pattern in a viscous and heat-conducting gas departs from the ideal flow calculations. "The authors express their deep gratitude to S. A. Kristianovich for his evaluation of this work." Orig. art. has: 40 equations.

ASSOCIATION: none

SUBMITTED: 20Jul64

SUB CODE: ME, TD

NO REF SOV: 008

ENCL: 00

OTHER: 010

Card 4/4

BANNIKOV, D.P.; SHEFTER, S.A., redaktor; KANDEL',Ye.A., inzhener, retsenzent.
BELYKH, B.P., dotsent, retsenzent.

[Mining electric engineering] Gornaia elektrotekhnika. Sverdlovsk,
Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii,
1953. 312 p.   (MLRA 7:7).
    (Electricity in mining)

AUTHORS: Dement'yeva, M. I., Dobychin, D. r., and Shefter, V. Ye.

TITLE: Use of coarsely porous glass for gas-liquid chromatography

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 1, 1962, 228 - 229

TEXT: The glass to be tested for its suitability as a carrier substance
for gas-liquid chromatography was prepared as follows: sodium borosilicate
glass of the type ДВ-1 (DV-1) was kept at $650^{\circ}C$ for 24 hrs, and at $570^{\circ}C$
for 72 hrs, crushed, and the grain fraction between 0.25 and 0.5 mm in
diameter was first treated with 3 N HCl at 50 - $55^{\circ}C$ for 24 hrs. After
rinsing, further treatment was conducted with 0.5 N NaOH at $16^{\circ}C$ for 12 hrs.
The pores of the glass were 600 - 900 Å large, and the specific surface
was 10 - 14 m^2/g. The crushed glass, rinsed and dried at $120^{\circ}C$, was
treated with triethyleneglycol-n-butyric acid ester dissolved in ethyl
ether. Pentane-isopentane mixtures were separated chromatographically.
Parallel experiments were conducted with kieselguhr, diatomite brick from
the Inzenskiy zavod (Inza Plant), and with the US preparations Chromosorb
and Sterhamol. The separation factor was 1.1 - 1.2 for all carrier

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Use of coarsely porous glass...

5/016/62/036/001/016/017
B119/B101

substances. In order to characterize the efficiency of the individual carriers, the degree of separation (a ratio of the distance between the peaks to the height of the lowest peak) had to be introduced as an auxiliary quantity. For coarsely porous glass it is 1.0, and for the remaining substances it is 0.1 - 0.7. Coarsely porous glass is therefore suitable for gas-liquid chromatography, owing to the uniformity of pores and to the absence of fine pores. There are 1 table and 2 Soviet references.

ASSOCIATION. Vsesoyuznyy nauchno-issledovatel'skiy institut nefte-khimicheskikh protsessov (All-Union Scientific Research Institute of Petrochemical Processes)

SUBMITTED: June 11, 1961

Card 2/2

SHEFTER, YA. I.

Windmills

"High-speed windmills." S. B. Perli. Reviewed by YA. I. Shefter, I. V. Rozhdestvenskiy. Sel'hkozmashina no. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952 UNCLASSIFIED

1. SHEFTER, YA. I., Eng., KOLODIN, V.N.

2. USSR (600)

4. Windmills

7. Shortcomings of the regulator of windmill model D-18. Sel'khozmashina No. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

SHEFTER, M.I., engineer; ROZHDESTVENSKIY, I.V., engineer.

Use of stepless transmission in wind-power units. Sel'khozmashina no.9:6-11
S '53.   (MLRa 6:9)
                                          (Windmills)

. . . . , . . .

Dissertation: "Investigation of a Stabilizer-Type Wind Motor With an Inertial Accumulator."
Cand Tech Sci, Joint Sci Council of the All-Union Sci Res Inst of Mechanization of Agricul-
ture (VIM) and All-Union Sci Res Inst of Electrification of Agriculture (VIESKh), 27 Apr 54.
(Vechernyaya Moskva, Moscow, 15 Apr 54)

SO: SUM 243, 19 Oct 1954

SHEFTER,Ya.I., kandidat tekhnicheskikh nauk; ORLOV,V.A., inzhener

Some problems of statics and dynamics of the centrifugal regulating
device for the D-18 windmill. Sel'khozmashina no.5:17-22 My '55.
(MLRA 8:6)

1. Vsesoyuznyy institut mekhanizatsii sel'skogo khozyavstva.
(Windmills)

SEKTOROV, Vladimir Rafailovich; SHEFTER, Yakov Iosifovich

[Windmills on livestock farms] Vetrosilovye ustanovki na zhivotno-
vodcheskikh fermakh. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1956.
79 p.   (MLRA 10:9)
         (Windmills)   (Stock and stockbreeding)

14-1-506

AUTHOR: Shefter, Ya. I.

TITLE: Structure of Wind Current (O strukture vetrovogo potoka)

PERIODICAL: Tr. Vses. n.-i. in.-ta mekhaniz. s. kh., 1956, Nr 22,
              pp. 46-60

ABSTRACT: The results are given of studies made in 1952 and 1953
              using several anemometers, including some   with low
              inertia, to solve certain problems connected with wind-
              generated power. It was determined that the structure
              of the wind current measured at a single point does not
              extend to all the circumference of the area swept by the
              wheel of the wind-driven power generator. As a rule,
              small gusts at different point of the surface coincide
              neither in magnitude nor time. At the same time, longer
              clocking (about 10 seconds) of wind velocity, commen-
              surate with surfaces swept by the wheel, is character-
Card 1/2   istic for larger areas. The gusts of wind current de-

SOV/112-57-6-12108

AUTHOR: Shefter, Ya. I.

TITLE: Use of Inertial Accumulators in Windmills
    (Primeneniye inertsionnykh akkumulyarotov v vetroagregatakh)

PERIODICAL: Tr. Vses. n.-i. in-ta mekhaniz. s. kh., 1956, Vol 22, pp 61-91

ABSTRACT: Small-capacity (10-30 kw) windmills operate, as a rule, with a
    thermal reserve. The use of storage batteries is not economical. However,
    to smooth out windmill power pulsations, it is very expedient to use an inertial
    buffer accumulator that has a simple construction and a small weight per unit
    of stored energy. The operation of an inertial accumulator was investigated in
    conjunction with a type D-18 windmill that has a centrifugal aerodynamic
    regulation. The inertial accumulator is, in fact, a 1.5-t steel disk rotating at
    1,000 rpm in a housing and coupled with the windmill by means of a freewheeling
    clutch. Energy transmission is possible only from the motor to the accumulator

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SOV/112-57-6-12108

Use of Inertial Accumulators in Windmills

disk, which makes the accumulator different from a simple flywheel that can receive energy from or give it to a motor. An inertial accumulator used with a windmill provides the following advantages: (1) the possibility of operating an individual windmill with a load corresponding to the **average** available capacity; (2) an increase in annual energy production; despite the additional losses in the accumulator, the potential annual production of a windmill with an average annual wind velocity of 5 m/sec increases by 20%, according to the author; the time of operation of the reserve prime mover decreases by 700 hours per year; (3) a reduction of overloads in the mechanical transmission of the windmill, which permits a lighter construction of the windmill; (4) the utilization of low average speeds of the wind that prevails during the year; i.e., an increase in the annual operating time of the windmill ; (5) a windmill can take peak loads exceeding its average capacity; (6) improvement in operating conditions and decrease in wear and repairs of the reserve mover. The results of the above experiment permit recommending inertial-accumulator-type

Card 2/3

SOV/112-57-6-12108

Use of Inertial Accumulators in Windmills

windmills for wide use in agriculture. Utilization of the inertial-accumulator can be increased if a stepless transmission is introduced between it and the generator. Bibliography: 8 items.

V.R.S.

Card 3/3

SHEFTER, Ya.I., kand.tekhn.nauk

Using windmills for the mechanization of labor in livestock farming. Zhivotnovodstvo 19 no.12:71-74 D '57. (MIRA 10:12)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut elektrifikatsii sel'skogo khozyaystva.

(Windmills)

SHEFTER, Ya.I., kandidat tekhnicheskikh nauk.

Concurrent use of windmills and heat engines for producing electric
energy. Dokl. Akad. sel'khoz. 22 no.6:44-48 '57.   (MIRA 10:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii
sel'skogo khozyaystva. Predstavlena akademikom W.A. Zheligovskim.
                (Electric power plants)   (Windmills)

28-58-1-22/34

AUTHOR: Shefter, Ya.I., Candidate of Technical Sciences

TITLE: About the Basic Parameters of Windmills (Ob isnovnykh para-
               metrakh vetroustanovok)

PERIODICAL: Standartizatsiya, 1958, # 1, pp 60-61 (USSR)

ABSTRACT: The "GOST 2656-55"-standard for basic parameters and
               types of windmills is critisized. Inconsistencies in
               stipulations concerning the rated loadings, the maximum
               wind speeds in various regions, the diameters and non-inter-
               changeability of the wind-driven wheels and parts, etc, are
               pointed out, and practical examples of these inconsistencies
               are indicated. It is said that many USSR engines for wind-
               mills have a weight/power unit ratio 2 to 3 times higher
               than the best foreign wind engines.
                   The author is of the opinion that the weight of engines
               can be reduced considerably and suggests corresponding
               amendments to the state standard.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii
               sel'skogo khozyaystva (All-Union Scientific-Research Institute
               for Mechanization of Agriculture)

AVAILABLE: Library of Congress
Card 1/1

SHEFTER, Ya.I., kand.tekhn.nauk; ROZHDESTVENSKIY, I.V, kand.tekhn.nauk

Problems in calculating strength and designing high-speed wind-driven engines. Trakt. i sel'khozmash. 8:19-27 Ag '58.
(MIRA 11:8)

(Windmills)

SHEFTER, Ya.I., kand. tekhn. nauk.

Basic parameters for windmills. Standartizatsiia 22 no.1:60-61
Ja-F '58.   (MIRA 11:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii
sel'skogo khozyaystva.
                        (Windmills)

GLUSHCHENKO, Vladimir Petrovich; KARMISHIN, A.V., inzh., retsenzent;
SHEFTER, Ya.I., kand.tekhn.nauk, red.; SERDYUK, V.K., red.izd-va

[Using windmills in agriculture] Primenenie vetrodvigatelei v
sel'skom khoziaistve. Kiev, Gos.nauchno-tekhn.izd-vo mashino-
stroit.lit-ry, 1959. 97 p.   (MIRA 13:6)
                    (Windmills)

8(5)

PHASE I BOOK EXPLOITATION   SOV/2570

Akademiya nauk SSSR. Energeticheskiy institut

Voprosy vetroenergetiki (Problems in Wind Power Engineering)
Moscow, Izd-vo AN SSSR, 1959. 135 p. Errata slip inserted.
1,700 copies printed.

Ed. of Publishing House: V. N. Golovko; Tech. Ed.: I. N.
Guseva; Editorial Board: Ye. M. Fateyev, Corresponding Member,
VASKhNIL, Professor (Resp. Ed.), D. N. Bystritskiy, K. P.
Vashkevich, A. V. Karmishin, V. R. Sektorov, V. Ye. Fedotov,
M. O. Frankfurt, O. I. Sholomovich.

PURPOSE: The book is intended for power engineers, scientists,
and research workers engaged in wind power engineering.

COVERAGE: These articles discuss aspects of wind power utiliz-
ation. Individual papers treat the aerodynamic properties of
already existing windmills, the construction of new types of
windmills, wind electric power stations, and efficient wind-
electric and wind-pumping units. A theory on the control of
high-speed windmills is also discussed. The TsNILW (Central
Scientific Research Laboratory for the Study of Windmills)
is reported to be working on the development of a 400 kw
wind - electric station in parallel operation with several
stations with common buses to supply electricity to rural
areas. References accompany each article.

Shefter, Ia.I. Studying the Operation of the D-18 Windmill with
an Inertia Accumulator   66

Koshechkin, I.V., The Problem of Limiting Power Indexes of a
Wind-Electric Unit With Hydrogen Storage of Wind Energy   82

Frankfurt, M.O., Computing the Overloading of High-Speed Wind
Wheels During Wind Gusts and Squalls   98

Akkiev, A.I., A Method for Determining the Power of a Wind-Elec-
tric Station in a Non-Wind Power System   106

Sabinin, G.Kh. On the New Scheme of a Wind-Electric Station
With Pneumatic Power Transfer   118

Sui'ka, P.A. Use of Wind-Electric Units for Providing Energy to
Rural Radio Centers   128

Card 3/3

SHEFTER, Ya., kand. tekhn. nauk.

Using wind power for farm mechanization. Nauka i pered. op. v
sel'khoz 9 no.10:20-23 O '59   (MIRA 13:3)
        (Wind power) (Farm mechanization)

SHEFTER, Yakov Iosifovich, kand.tekhn.nauk; ROZHDESTVENSKIY, I.V., kand.
tekhn.nauk; PECHKOVSKIY, G.A., inzh.; SMELYANSKIY, V.A., red.;
SILIN, V.S., red.; PEVZNER, V.I., tekhn.red.

[Assembling, maintaining, and repairing wind-driven machinery]
Montazh, ekspluatatsiia i remont vetroustanovok. Moskva, Gos.
izd-vo sel'khoz.lit-ry, 1960. 301 p.   (MIRA 13:5)
          (Windmills--Maintenance and repair)

SHEFTER, Ya., kand.tekhn.nauk

The wind should not blow for nothing.   Izobr.i rats. no.9:22-23 S
'60.   (MIRA 13:10)
                        (Windmills)

SHEFTER, Ya.I.

Useful work of the wind. Priroda 51 no.10:57 O '62.
(MIRA 15:10)

(Soviet Central Asia—Wind power)

SHEFTER, Ya.I.; KHELLENOV, O.B., kand. tekhn. nauk

Windmills for pumping water in pastures and the system of
their maintenance. Gidr. i mel. 15 no.9:41-46 S '63.
(MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektri-.
fikatsii sel'skogo khozyaystva (for Shefter). 2. Turkmenskiy
nauchno-issledovatel'skiy institut zemledeliya (for Khellenov).

SHEFTER, Ya.I.

Using windmills in agriculture. Biul.tekh.-ekon.inform.Gos.nauch.-
issl.inst.nauch.i tekh.inform. 16 no.7:28-33 '63.   (MIRA 16:8)
                    (Windmills)

USSR/... ...

8. ... pneumatic drive ... a wire-operated water pump. Trakt. i
sel'khozmash, no.2 :28-31 F '65.
(MIRA 18:4)

1. Vsesoyuznyy nauchn-issledovatel'skiy institut elektrifikatsii
sel'skogo khozyaystva.

ACC NR: AP7002617 ‾ (A, N)   SOURCE CODE: UR/0413/66/000/023/0. /0120

INVENTOR: Shafter, Ya. I.; Alyab'yev, D. V.

ORG: None

TITLE: A single-chamber pneumatic displacement pump. Class 59, No. 189 ::
[announced by the All-Union Scientific Research Institute for Electrification of
Agriculture (Vsesoyuznyy nauchno-issledovatel'skiy institut elektrifikatsii
sel'skogo khozyaystva)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 130

TOPIC TAGS: pneumatic device, fluid pump

ABSTRACT: This Author's Certificate introduces a single-chamber pneumatic displace-
ment pump. The closed chamber of the pump is submerged in the fluid to be transferred
and communicates alternately with a compressed air receiver and with the atmosphere
or with the suction line of a compressor by using an air distributor. This distributor
is controlled by a device which produces pulses for valve reversal depending on the
pressure in the receiver. The efficiency and operating reliability of the pump are
improved by making the air distributor in the form of a double-seated spring loaded
valve mounted in a cavity permanently connected to the closed pump chamber. An auto-
matic pressure regulator based on Author's Certificate No. 189019 is used as the device
for producing pulses.

UDC: 621.691.21

Card 1/2   0930   2735

ACC NR: AP7002617
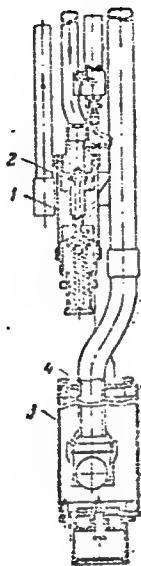
1--air distributor valve; 2--double-seated valve; 3--pump chamber; 4--cavity

SUB CODE: 13/   SUBM DATE: 15May64

Card 2/2

SHEFTER, Ye.A., zasluzhennyy vrach RSFSR

Method for the surgical treatment of cysts of the pancreas.
Khirurgiia 35 no.3:32-37 Mr '59.   (MIRA 12:8)

1. Iz khirurgicheskogo otdeleniya (zav..Ye.A.Shefter) 2-y
Kaluzhskoy gorodskoy bol'nitsy (glavnyy vrach N.V.Buyal'skiy).
            (PANCREAS, cysts
                    surg. technic (Rus))

SHEFTOLOVICH, V.

Revolving semigantry beam cranes. Metallurg 8 no.7:59 Jl '63.
(MIRA 16:8)

(Cranes, derricks, etc.)

The methods described assume the need for provisions for crane accidents, describe the methods of strengthening overhead crane rails by means of reinforced concrete girders, indications of defects and locations of tracks, and include recommendations on correct operation and maintenance of crane tracks.

This analysis is intended for engineers and workers occupied in the operation and maintenance of overhead crane tracks.

TO: Dvizhushchiy Sostav (Rolling Stock), No. 117, 1951, Moscow, (U-2472)

SHMELEV, Nikolay Vasil'yevich; SHEGAL, Abram Markovich, glav.
        mekhanik; RAZNIKOV, I., red.; POKHLEBKINA, M., tekhn.
        red.

        [Overall mechanization on building sites] Kompleksnaia
        : ekhanizatsiia na stroike. Moskva, Mosk. rabochii, 1962.
        34 p.   (MIRA 16:10)

        1. Glavnyy inzhener tresta "Mosstroymekhanizatsiya" no.7
        (for Shmelev).
                        (Construction equipment)

SHEGAL, A.V., inzhener, laureat Stalinskoy premii.

Installation of metal construction in medium building structures. Mekh.trud. rab. 7 no.9:27-31 S '53.   (MLRA 6:9)
(Building, Iron and steel)

SHEGAL, A.V., inzhener, laureat Stalinskoy premii.

The SE-3 excavator used as an erecting crane. Mekh.stroi.11 no.9:
21-23 S '54.   (MLRA 7:9)
        (Cranes, derricks, etc.)

SHEGAL, A.V., inzhener, laureat Stalinskoy premii.

New methods of reconstructing blast furnaces. Stroi.prom. 32
no.7:16-20 Jl '54.   (MLRA 7:7)
     (Blast furnaces)

SHEGAL, A.V., laureat Stalinskoy premii

    Installing steel structural elements in building open-hearth
plants. Stroi.prom.33 no.6:21-25 Je'55.   (MIRA 8:10)
  (Building, Iron and steel) (Metallurgical plants)

TISHCHENKO, Yefim Ivanovich; ZALKIND, Aleksandr Samoylovich; SHEGAL, A.V.,
    red.; TSYMBALIST, N.N., red.izd-va; ZEF, Ye.M., tekhn.red.

[Dismantling of blast furnaces during reconstruction] Nadvizhka
domennykh pechei pri rekonstruktsii. Sverdlovsk, Gos.nauchno-
tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, Sverdlovskoe
otd-nie, 1957. 95 p.   (MIRA 11:3)
        (Blast furnaces)

SHEGAL, A., inzh.

Bucket for working muddy ground. Na stroi.Mosk. 2 no.6:21
Je '59.   (MIRA 12:8)
       (Excavating machinery--Equipment and supplies)

SHEGAL, A.V.

Building blast furnace No.5 of the Chelyabinsk Metallurgical Plant.
Prom. stroi. 37 no.1:39-45 Ja '59.   (MIRA 12:1)

1. Zamestitel' glavnogo inzhenera tresta Uralstal'konstruktsiya.
            (Chelyabinsk--Blast furnaces)
            (Precast concrete construction)

SHEGAL, A.V., inzh.; LOGINOV, G.V., inzh.

Building a series of shops at the Ural Heavy Machinery Plant.
Prom.stroi. 39 no.8:6-9 '61.   (MIRA 14:9)
          (Sverdlovsk--Precast concrete construction)

SHEGAL, A.V., inzh.; PEREMETOV, B.V.

Construction of an open-hearth plant with large-capacity furnaces.
Prom.stroi. 40 no.6:5-8 '62.   (MIRA 15:6)
            (Magnitogorsk—Open-hearth furnaces)

CHUVATOV, V.V.; BEREZIN, N.N.; METSGER, E.Kh.; NAGIN, V.A.; KARTASHOV,
N.A., kand. tekhn. nauk, dots.; MIL'KOV, N.V., kand. tekhn.
nauk; BYCHKOV, M.I., kand. tekhn.nauk, dots.; SUKHANOV, V.P.,
SHLYAPIN, V.A.; KORZHENKO, L.I.; ABRAMYCHEV, Ye.P.; KAZANTSEV,
I.I.; YARES'KO, V.F.; LUKOYANOV, Yu.N.; DUDAROV, V.K.; BALINSKIY,
R.P.; KOROTKOVSKIY, A.E.; PONOMAREV, I.I.; NOVOSEL'SKIY, S.A.,
kand. tekhn.nauk, dots.; IL'INYKH, N.Z.; TSITKIN, N.A.; ROGOZHIN,
G.I.; PRAVOTOROV, B.A.; ORLOV, V.D.; RACHINSKIY, M.N.; KULTYSHEV,
V.N.; SMAGIN, G.N.; KUZNETSOV, V.D.; MACHERET, I.G.; SHEGAL, A.V.;
GALASHOV, F.K.; ANTIPIN, A.A.; SHALAKHIN, K.S.; RASCHEKTAYEV, I.M.;
TISHCHENKO, Ye.I.; FOTIYEV, A.F.; IPPOLITOV, M.F.; DOROSINSKIY;
G.P.; ROZHKOV, Ye.P.; RYUMIN, N.T.; AYZENBERG, S.L.; GOLUBTSOV,
N.I.; VUS-VONSOVICH, I.K., inzh., retsenzent; GOLOVKIN, A,M., inzh.,
retsenzent; GUSELETOV, A.I., inzh., retsenzent; KALUGIN, N.I.;
inzh., retsenzent; KRAMINSKIY, I.S., inzh., retsenzent; MAYLE,
O.Ya., inzh., retsenzent; OZERSKIY, S.M., inzh., retsenzent; SKOBLO,
Ya.A., dots., retsenzent; SPERANSKIY, B.A., kand. tekhn. nauk,
retsenzent; SHALAMOV, K.Ye., inzh., retsenzent; VOYNICH, N.F., inzh.,
red.; GETLING, Yu., red.; CHERNIKHOV, Ya., tekhn. red.

[Construction handbook] Spravochnik stroitelia. Red.kollegiia: M.I.
Bychkov i dr. Sverdlovsk, Sverdlovskoe knizhnoe izd-vo. Vol.1. 1962.
532 p. Vol.2. 1963. 462 p.   (MIRA 16:5)
                (Construction industry)

SHINGAL, A.V.

Mounting structural elements of an oxygen-blown converter assembly plant. Prom.stroi. 41 no.9:2-6 S '63.   (MIRA 16:11)

SHEGAL, G., inzh.; NEFEDOV, V., inzh.

Using industrial methods in sanitary-engineering and
electric-wiring operations. Zhil.stroi. no.8:18-19
'60.   (MIRA 13:8)
                (Sanitary engineering)
                (Electric wiring)

SHEGAL, Genrikh L'vovich; KUZNETSOV, N.A., red.; BORUNOV, N.I., tekhn. red.

[Electric executive mechanisms] Elektricheskie ispolnitel'nye me-
khanizmy. Moskva, Gos. energ. izd-vo, 1961. 95 p. (Biblioteka po
avtomatike, no.32)   (MIRA 14:10)
          (Electric controllers)   (Servomechanisms)

SHEGAL, G.I., inzh.; FRIDMAN, V.Ye., inzh.

Certain problems encountered in the overall automation of large
thermal electric power plant. Elek.sta. 33 no.1:10-13 Ja '62.
(MIRA 15:3)

(Electric power plants)(Automatic control)

ACC NR: AM6014345   Monograph   UR/

Mironov, Konstantin Andreyevich; Khatsyanov, Feliks Grigor'yevich;
  Shegal, Genrikh L'vovich; Shipetin, Lev Iosifovich; YAnovskiy, Petr
  Illarionovich

Technology of automatic control systems design; reference materials
  (Tekhnika proyektirovaniya sistem avtomatizatsii; spravochnyye
  materialy) Moscow, Izd-vo "Mashinostroyeniye", 1966. 702 p.
  illus., biblio., tables. Errata slip inserted. 16,500 copies printed.

TOPIC TAGS: automation, automatic control, electric control system,
  pneumatic control system, automatic control design, automatic control circuit

PURPOSE AND COVERAGE: This book is intended for technical personnel
  concerned with the planning of automation systems for technological
  processes. It can also be useful to students at schools of higher
  technical education and technical schools. The book contains docu-
  mentary references concerning the design of automation systems and
  gives examples of projects based on the plans, norms, and manuals
  of the leading design organizations of the USSR. In addition to the
  above, the book contains recommendations regarding the selection of
  means of automation, methods of designing control, signaling, and

Card 1/2   UDC 658.52.011.56 001.12

automatic regulation circuits, the arrangement of control panels, methods of computing automatic regulation systems, choke-adjustment units, and the tapered devices of flow-meters. Data on the equipment and assembly materials used in the systems for automation-control and regulation of technological processes are presented.

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ACC NR: AM6014345

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ACC NR: AM6014345

Card 8/9

ACC NR: AR6014345

SUB CODE: 13/ SUBM DATE: 18Nov65/ ORIG REF: 121/ OTH REF: 003

SHEGAL', N.

Two years of work with new teaching methods. Avt.transp. 39
no.3:47-48 Mr '61. (MIRA 14:3)

1. Gor'kovskiy avtodorozhnyy tekhnikum.
(Highway transport workers--Education and training)

ZYABREVA, Nina Nikolayevna, kandidat tekhnicheskikh nauk, dotsent; SHEGAL, Mirra Yakovlevna, kandidat tekhnicheskikh nauk; ZHURAVLEV, A.N., kandidat tekhnicheskikh nauk, dotsent, retsenzent; IVANOV, A.G., kandidat tekhnicheskikh nauk, dotsent, redaktor; MODEL', B.I., tekhnicheskiy redaktor

[Laboratory exercises for the course "Interchangeable parts and technical measurement."] Laboratornye zaniatiia po kursu "Oznovy vzaimozameniaemosti i tekhnicheskie izmereniia." Izd. 2-oe, ispr. i dop. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 335 p.   (MIRA 10:1)
        (Physical measurements)   (Engineering instruments)

AUTHOR: Snegal, M.Ya., Candidate of Technical Sciences   PB 58-3-7/39

TITLE: Practical Application of Standards in the Tolerances
              of Gear Transmissions (K praktike primeneniya standartov na
              dopuski zubchatykh peredach)

PERIODICAL: Standartizatsiya, 1958, Nr 3, pp 27-29 (USSR)

ABSTRACT: From 1 Jan 1959, the industry begins the inspection and accep-
             tance of gear wheels and worm gear pairs in accordance with
             the 1643-56, 1758-56, and 3675-56 "GOST" standards. The new
             standards require additional comments, as they are not familiar
             to technicians. TsNIITMASh has issued "Instructions for the
             Application of GOST to the Tolerances of Spur, Bevel, and Worm
             Gear Transmissions". The article treats problems arising at
             the accuracy inspection required by the "GOST 1643-56", which
             regulates the kinematic accuracy of gears, the smoothness of
             work, and the tooth contact. It is mentioned that checking
             devices for one-profile checks are now in the assimilation stage.
             The standardization of the tolerances of measuring gears for
             checking narrow helical, bevel, and worm gears, and the indu-
             strial production of such measuring gears must be started soon.
Card 1/1   There is 1 table.

             1. Gear transmissions—Standards

MOSCOW. Mashrabotny Tsekhov tekhnicheskoye oshinshche

Vzaimozamenyayemost' i tekhnika izmereniy v mashinostroyenii (Interchangeability and Measurement Technique in Machinery Manufacture) Moscow, Mashgiz, 1959. 232 p. (Series: Mashinostroyeniye sbornik. No. 1) Errata slip inserted. 3,000 copies printed.

Additional Sponsoring Agency: Moscow. Stankoinstrumental'nyy institut imeni I. V. Stalin.

Editorial Board: A. I. Yakushev, Doctor of Technical Sciences, Professor; Yu. I. Volodin, Candidate of Technical Sciences, and M. N. Gauchev, Candidate's of Technical Sciences; Ed.: N. M. Lysenko, Candidate of Technical Sciences; M. A. Dokukina, Candidate of Technical Sciences; and A. I. Yakushev, Doctor of Technical Sciences, Professor; Managing Ed. for Literature on Machine and Instrument Construction: N. V. Pokrovskiy, Engineer; Ed. of Publishing House: G. F. Kochetov; Tech. Ed.: A. P. Gusova.

PURPOSE: This collection of articles is intended for scientific workers and technical personnel, studying problems of interchangeability and technical measurements in machinery manufacture.

COVERAGE: The book deals with trends in the development of basic problems of interchangeability. Existing measuring equipment in the USSR and other countries is discussed. Some design and utilization problems in the use of conventional and automatic measuring devices are outlined. Emphasis is given to methods and equipment for feedback and mechanized control and control of the geometry and surface roughness of parts. No personalities are mentioned. References accompany several of the articles.

Syshrev, M. B., and O. P. Ryabinina. Methods of Calculating Tolerances for Center Distances of Holes in Classwork Plates and Bridges   70

Kravlev, M. L., Engineer. Dimensional Computations for Deviations in Elements of Taper Threading   93

Bugai, M. Kh. Candidate File   104

Volodin, Yu. I., Candidate of Technical Sciences. On the Use of the Combined File   104

Prostkov, A. I., Candidate of Technical Sciences, Docent. On the Problem of Error Errors (Due to Eccentricity and Misalignment)   111

Fedorov, A. D., Candidate of Technical Sciences, Docent. On the Calculation of Errors in Measurements with UIM, BMI, and BV-Type Optical-Mechanical Instruments   129

Yaroslav, A. D., Candidate of Technical Sciences. Investigation of Feedback-Control Devices for Checking Journal Diameters During Polishing With Carbide Wheels   134

Gauchev, M. N., Docent. On the Application of the Principle of Utilizing in the Design of Devices for Control and Measurement   155

Solisayev, M. S., Assistant Professor. On Methods of Translation: Control with Averaging of Measurement Data   178

Negrīyev, O. D., Engineer. Checking of Parts with Double Curvature   197

Torob'yev, M. A., Aspirant. A Universal Shrinkage Formula Right Gage   211

AVAILABLE: Library of Congress   230

ZYABREVA, N.N., kand. tekhn.nauk, dots.; SHEGAL, M.Ya., kand. tekhn. nauk, dots.; DVORETSKIY, Ye.R., kand. tekhn. nauk, retsenzent; TISHCHENKO, C.F., prof., doktor tekhn. nauk, red.; IVANOVA, N.A., red.izd-va; SOKOLOVA, T.F., tekhn. red.; TIKHANOV, A.Ya., tekhn. red.

[Problems and examples for a course on the principles of interchangeability and technical measurements] Sbornik zadach i primerov po kursu "Osnovy vzaimozameniaemosti i tekhnicheskie izmereniia." Moskva, Mashgiz, 1963. 280 p.   (MIRA 16:5)
                    (Interchangeable mechanisms)

MARICHEV, R.D., inzh., SHEGALOV, I.L., inzh.

Nomographs for mechanical calculation of wires and electric transmission cables. Elek. sta. 31 no.3:49-55 Mr '60.

(MIRA 13:8)

(Electric lines--Overhead)

MARICHEV, R.D., inzh.; SHEGALOV, I.L., inzh.

New data sheets for longitudinal side view of overhead electric power transmission lines. Elek. sta. 31 no.9:35-37 S '60.
(MIRA 14:10)

(Electric power distribution)
(Electric lines--Overhead)

NIKULIN, M.A., dotsent; SHEGALOV, I.L., inzh.

Efficiency of the operation of the primary motor of a diesel locomotive.
Trudy LIIZHT no.175:56-65 '61.   (MIRA 15:12)
                    (Diesel locomotives)

ACCESSION NR: AR4041525

S/0271/64/000/005/A037/A037

SOURCE: Ref. zh. Avtomatika, telemekhanika i vy*chislitel'naya tekhnika.
Svodny*y tom, Abs. 5A224

AUTHOR: Nikulin, M. A.; Shegalov, I. L.

TITLE: Theory and mathematical simulation of optimum control of autonomous
power systems

CITED SOURCE: Sb. tr. Leningr. in-t zh.-d. transp., vy*p. 205, 1963, 132-145

TOPIC TAGS: optimum control, power circuit, power system, diesel locomotive,
mathematical simulation

TRANSLATION: Considered is the theory and simulation of optimum control and
adjustment of power circuit of a diesel locomotive. It is maintained that methods
of calculus of variation are unfit for finding the optimum equation of the power
circuit of a diesel locomotive inasmuch as solution of the problem to a large
degree depends on factors which have random character and, therefore, ap-

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ACCESSION NR: AR4041525

plication of probability methods is expedient. The most universal criterion is considered the average efficiency of entire power circuit of a diesel locomotive during the time of work T for a portion of run. Expression for fuel consumption in relation to average efficiency may be presented in the form:

$$G = a_0 + a_1 \eta_{\kappa av} + a_2 \eta_{\kappa av}^2 + a_3 \eta_{\kappa av}^3.$$

Coefficients of the equation can be found by graphic or analytic method during solution of equation of motion through run at a given value of the weight of the train and time of motion. During solution of problem, with use of experimental trips, processing of data is conducted by methods of correlation analysis. Optimum value of $\eta_{\kappa av}$ is found from equation $dG/dt = 0$. There are offered mathematical models taking into account the characteristics of a diesel engine, supercharger, fuel and pressure indicators, and also actuating mechanisms which allow us to select optimum conditions for running the train and an optimum method of control of fuel consumption with little expenditure of additional time. Offered method may be applied to any autonomous power systems without essential changes. Four illustrations, Bibliography: 8 references.

SUB CODE: MA, IE   ENCL: 00

Card 2/2

SHEGALOV, L. A.

Late roentgenokymographic observations following myocardial infarc-
tion. Terap. arkh. 30 no.12:19-22 D '58.   (MIRA 12:1)

1. Iz Leningradskogo kardiologicheskogo sanatoriya (nauchnyy rukovoditel'
prof. M.I. Khilivitskaya).
        (MYOCARDIAL INFARCT, physiol.
            roentgenokmography in convalescence (Rus))
        (KYMOGRAPHY,
            roentgenokymography in convalescence in myocardial infarct
            (Rus))

BILYNSKIY, B.T.; SHEGEDIN, Yu.I.

Myoblastic myoma simulating recurrence of cancer of the breast; one observation. Vop. onk. 11 no.4:101-102 '65. (MIRA 18:8)

1. Iz kafedr obshchey khirurgii (zav. - prof. A.I.Gratyshak) i patologicheskoy anatomii (zav. - prof. Ye.I.Pal'shevskiy) L'vovskogo gosudarstvennogo meditsinskogo instituta na baze oblastnoy klinicheskoy bol'nitsy (glavnyy vrach - N.I.Besedin).

OYVIN,I.A.; BALUDA,V.P.; SHEGEL,S.M.; TOKAREV,O.Y.; VENGLINSKAYA, E.A.;
YAGODKINA,E.G.

Anticoagulant and antiphlogistic properties of phlogodym
(neodymium pyrotechol disulphonate). Acta physiol. acad. sci.
Hung. 24 no.3:373-379 '64

1. Department of Pathological physiology, Kuban Medica. Insti-
tute, Krasnodar, USSR.

*

BOLOTOV, V.V.; GERASIMOV, V.N.; GOFMAN, I.V.; KAMENSKIY, M.D.;
MELENT'YEV, L.A.; PRINTSEV, A.A.; USOV, S.V.; SHEGLOV, A.P.

Suren Nikolaevich Nikogosov; obituary. Elektrichestvo no.10:
93 O '60.   (MIRA 14:9)
          (Nikogosov, Suren Nikolaevich, 1900-1960)

VARSHAVSKIY, Ya.M., doktor khim.nauk, red.; GEL'BSHTEYN, A.I., kand.
khim.nauk [translator]; SHUB, D.M., kand.khim.nauk [translator];
SHCHEGLOV, O.F., kand.khim.nauk [translator]; ARNOL'DOV, V.V., red.;
IOVLEVA, N.A., tekhn.red.

[Catalytic, photochemical, and electrolytic reactions] Katali-
ticheskie, fotokhimicheskie i elektroliticheskie reaktsii. Moskva,
Izd-vo inostr.lit-ry, 1960.   436 p. Translated from the English.
                                            (MIRA 13:11)

              (Chemical reactions)

SHEGINSKIY, B.

Our strength is in group work.   Mast.ugl. 9 no.2:6 F '60.
(MIRA 13:7)

1. Nachal'nik uchastka shakhty No.4 "Novo-Volynskaya" L'vovskogo
sovnarkhoza.
(Lvov-Volyn' Basin--Coal mines and mining)

SHEGLOV, P. V.

" Temperatures and particle heating in the auroral atmosphere "
Report to be submitted at the IAU and IUGG Symposium on
Theoretical Interpretation of Upper Atmosphere Emissions, Paris
France, 25-29 June 1962

1. State Astronomical Institute imeni P. K. Shternberg, Moscow.

3(1)

PHASE I BOOK EXPLOITATION   SOV/1840

Vsesoyuznoye astronomo-geodezicheskoye obshchestvo

Astronomicheskiy kalendar; yezhegodnik. Peremennaya chast'; 1959 (Astronomical Calendar; Yearbook. Variable Part; 1959) Moscow, Fizmatgiz, 1958. 370 p. 8,500 copies printed.

Ed.: I.Ye. Rakhlin; Tech. Ed.: S.M. Akhlamov; Editorial Board: P.I. Bakulin (Resp. ed.), S.G. Kulagin, A.G. Masevich, and P.P. Parenago.

PURPOSE: This astronomical calendar is intended for specialists in astronomy, astrophysics, and geophysics.

COVERAGE: The book is divided into two parts. The first, based on data taken from the USSR Astronomical Yearbook for 1959, consists of ephemerides and accompanying text, compiled and written by the GAOO (State Astronomical and Geodetical Society) - notes on following specialists: S.G. Kulagin and L.D. Korbazyuk of the ephemerides of the Sun and Moon; M.M. Dagayev of the MOVAGO (Moscow Branch of the All-Union Astronomical and Geodetic Society) - text and maps of the visible trajectories of the planets, text and maps of eclipses, the physical coordinates

Card 1/10

of the Sun, Moon, Mars, and Jupiter, the satellites of Jupiter and Saturn; N.D. Rozenbyrus (MOVAGO) - ephemerides and helio- centric longitudes of planets; I.F. Yegorchenko, A.A. Kaverin, I.G. Konstantinova, V.A. Kuklina, G.V. Kuklin, Z.G. Sazonova, L.I. Chernykh, and M.S. Chernykh - data on 144 points in the USSR for the full solar eclipse of October 2, 1959; Ye.G. Beado- vich (GAOO) - occultation of the stars and planets by the Moon, observation of the Polar Star, computation of stellar coordinates; V.A. Bronshteyn (MOVAGO) - comets; M.S. Yakhontov - the lesser planets; and, M.B. Perova (MOVAGO) - variable stars. The second part, the Supplement, contains a review of the achievements in astronomy for the years 1956 and 1957, written by V.A. Bronshteyn, O.D. Dokuchayeva, L.A. Kataev, M.A. Klyakotko, P.P. Parenago, and I.S. Shcherbina-Samoylova under the editorship of A.G. Masevich. articles on artificial satellites, the danger in astronautics from meteors, the nature of galaxies, articles on scientific meetings held in the Soviet Union and abroad, and article on the anniver- series of events in astronomy. The book is profusely illustrated with tables, maps, photographs, and diagrams. The Supplement includes some 125 Soviet references grouped according to subject matter and type of publication.

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Astronomical Calendar; Yearbook. Variable Part; 1959   SOV/1840

Joint Visiting Session of the Astronomical Council of the AN SSSR and the Academy of Sciences of the Azerbaydzhan SSR (N.I. Klyakotko)   271

This article treats the meeting at which M.M. Aliyev, A.I. Mikhaylov, A.A. Yakovkin, S.K. Vsekhsvyatskiy, V.V. Shargadv, V.P. Shcheglov, Z.I. Emiliov, V.A. Krat, and G.F. Sultanov participated.

The 350th Anniversary of the Formulation of Kepler's First Two Laws (Yu.A. Ryabov)   275

This article is a historical account and discussion of Kepler's first two laws.

The 85th Anniversary of the Tashkent Astronomical Observatory (V.P. Shcheglov)   286

This article provides a detailed historical account and description of the Tashkent Astronomical Observatory of the Academy of Sciences of the Uzbek SSR, the oldest scien- tific research institution in Central Asia. The Observatory

Card 7/10

BALANDIN, A.A.; NEYMAN, M.B.; BOGDANOVA, O.K.; ISAGULYANTS, G.V.;
     SHEGLOVA, A.P.; POPOV, Ye.I.

     Investigation of the dehydrogenation of C^{14} labelled butane-
     butylene mixtures. Izv. AN SSSR. Otd. khim.nauk no.2:157-165
     F '57.   (MIRA 10:4)

     1. Institut organicheskoy khimii im. N.D.Zelinskgo i Institut
     khimicheskoy fiziki Akademii nauk SSSR.
               (Dehydrogenation) (Carbon--Isotopes)
                    (Hydrocarbons)

L 18025-66   EWP(e)/EWT(m)   WH
ACC NR: AP6007678   SOURCE CODE: UR/0413/66/000/003/0049/0049

INVENTOR: Demkina, L. I.; Shegalova, Z. N.   26
                                                                               B

ORG: none

TITLE: Optical glass. Class 32, No. 178457

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1966, 49

TOPIC TAGS: optic glass, barium containing optic glass

ABSTRACT: An Author Certificate has been issued for an optical glass based on P_2O_5, B_2O_3, BaO, and MgO. To obtain a low-crystallizability, γ-radiation-resistant glass with a high dispersion coefficient and increased dispersion in the blue part of the spectrum, the formulation used is: 27—34% P_2O_5; 9—13% B_2O_3; 45—50% BaO; 7—10% MgO, and in addition 0.5—1% CeO_2.   [SM]

SUB CODE: 11/ SUBM DATE: 04Jan65/ ATD PRESS: 4212

Card   1/1   vmb   UDC: 666.112.92:546.18
                                                   666.221.3

SHEGOLEV, D. E.

Eclipses, Lunar - 1952

Photographic photometry of the penumbra of the lunar eclipses of September 26, 1950, February 11, 1952 and August 5, 1952. Astron. tsir. no. 131, 1952.

9. Monthly List of Russian Accessions, Library of Congress, ____May____ 1953. Unclassified.

L 43047-65   ENT(m)/EPA(w)-2/ENA(m)-2   Pab-10/Pt-7   IJP(c)   GS

ACCESSION NR: AT5007917   S/0000/64/000/000/0137/0145

AUTHOR: Barabash, L. Z.; Veselov, M. I.; Gol'din, L. L.; Zenkevich, P. R.;
Pligin, Yu. S.; Sivkov, Yu. P.; Talyzin, A. N.; Shegoley, V. A.

TITLE: Survey report: operation of the 7-Gev proton synchrotron of the ITEF

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy.
Moscow, Atomizdat, 1964, 137-145

TOPIC TAGS: high energy accelerator

ABSTRACT: Operation of the 7-Gev accelerator for the period from September 1962 to
May 1963 is discussed. The accelerator was run continuously from 9 a.m. Tuesday to
8 a.m. Saturday, i.e. 95 hours a week. On Saturday and Monday, preventive mainte-
nance operations are carried out on the magnet and experimental rooms and on the
accelerator itself. During the indicated period, the accelerator produced beams
for physics experiments during 32% of the operating time and was used for 21% of
the time for investigative studies on itself. Thus, the full useful time repre-
sented 53% of the calendar time. As for the physics experiments, the operations
were directed mainly on two or three targets; here, the particles were distributed
among three or four installations working independently. In the case of the

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ACCESSION NR: AT5007917

investigations on the accelerator itself, studies were made on the various operational conditions, the form and behavior of the equilibrium orbit, the frequencies of betatron oscillations, the entrapment of particles during acceleration, the effectiveness of fast and slow targets, methods of operating on several targets, etc. At the beginning of the indicated period, the frequency of recurrence was 10 cycles a minute. In mid January it increased to 12 cycles a minute, and at the present time work is being conducted on enhancing it further. The forms of the operating magnetic cycle are discussed. The main work at present is conducted in the case of the trapezoidal form, since introduction of the flat portion sharply enhances the mean power and forces a lowering of the frequency of recurrence of cycles. Transition to the trapezoidal cycle is effected by regulation of the excitation current in the main generator. In the case of the triangular form of the cycle, the current in the magnetic blocks increases linearly for 1.57 seconds from 0 to 2.4 kiloamperes. The inverter state is held for 0.78 second. The variation of the mean (averaged over a week) current strength of the beam of accelerated particles for the indicated period is discussed. The observed beam intensity (about $1.5 \cdot 10^{10}$ particles per pulse) is determined by the main injector, which injects $(7-8) \cdot 10^{10}$ particles into the accelerator. Work is going on at present to increase the number of injected particles and also the coefficient of capture. The

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ACCESSION NR: AT5007917

kinetic energy of the protons at the end of the cycle is 7.3 Gev. 31 beam observation stations are now used. Orig. art. has 10 figures, 7 formulas, 3 tables

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE SSSR
(Institute of Theoretical and Experimental Physics, GKAE SSSR)

SUBMITTED: 26May64   ENCL: 00   SUB CODE: NP

NO REF SOV: 006   OTHER: 002

Card 3/3

776. Velocity of Medium Radio Waves near the Earth's Surface.
C. Viller and E. Schegolev. *Techn. Phys., U.S.S.R.* 4. 10. *pp.* 787–826, 1937. *In English.* —The technique of measuring the velocity of electromagnetic waves by the interference method of Mandelstam and Papalexi [see the preceding Abstract] is described in detail and results are given of measurements carried out between 1933 and 1936, particular attention being paid to the examination of all the test conditions and to the analysis of possible errors. The experimental results obtained under conditions approaching propagation in free space, as well as over sea, show that very steady interference phenomena between radio waves of a rational frequency ratio can be realised even for transmissions over considerable distances. Variations in the phase angles observed in certain experiments, which might be due to variation of the velocity of propagation, did not exceed a few degrees for most of the distances studied, so that the velocity is considered to remain constant to within at least 1 part in 10^4. The velocity under conditions approaching propagation in free space, and also over the surface of water, approaches closely to that of light in air, the mean of 8 results being $2 \cdot 994 \times 10^5$ km./sec. In the case of propagation close to the earth's surface the velocity depends materially on the local conditions. It is in this case important to distinguish between the true reduction in velocity and the apparent reduction, which depends on the lengthening of the path of the waves due to various deviating influences. It appears probable that the method employed is capable, with better apparatus, of giving more accurate results than those hitherto obtained.

A. W.

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789. Measurement of Phase Difference Between Harmonic Oscillations of Different Frequencies. E. Schegolev. *Techn. Phys.. U.S.S.R. 4, 10. pp. 827-840, 1937. In English.*—The problems connected with the measurement of phase differences between oscillations of different frequencies have lately acquired a certain practical importance especially in connexion with the application of the phenomena of interference of radio waves to the solution of certain scientific and engineering problems. The main practical method used to determine the difference of the phase angles in the case in question is by Lissajous' figures, but when using this method, or any other method, certain underlying assumptions have to be made. Accordingly, this paper deals first with certain fundamental definitions, and then describes some of the methods used by the author for measuring phase angles of oscillations having a rational frequency ratio. AUTHOR.

METALLURGICAL LITERATURE CLASSIFICATION

USSR / General and Special Zoology. Insects. Harm-   F
        ful Insects and Mites. Fruit and Berry Crop
        Pests.

Abs Jour: Ref Zhur-Biol., No 1, 1959, 2346.

Author : Shegoleva, G. I.
Inst   : The All-Union Scientific Research Institute of
         the Canning and Dry Vegetables Industry.
Title : The Stem Gall Midge is a Dangerous Pest of the
         Currant and the Gooseberry.

Orig Pub: Referaty nauchn. rabot. Vses. n.-i. in-t kon-
          servn. i ovoshche-sush. prom-sti, 1957, vyp. 4.
          117-119.

Abstract: The large-scale appearance of the midge gall
          (G) on the Moscow station of the All-Union
          Scientific Research Institute of the Canning
          and Dry Vegetables Industry was observed for

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USSR / General and Special Zoology. Insects. Harm-   P
    ful Insects and Mites. Fruit and Berry Crop
    Pests.

Abs Jour: Ref Zhur-Biol., No 1, 1959, 3346.

Abstract: clear-winged moth, 34% had mechanical damages,
    while 54% were only damaged by G. 58% of the
    stems were infected in the lower part, 36% at
    the base and 6% in the upper part. Pruning in
    the fall and subsequent burning of the branches
    (with the larvae) and applying of hexachloro-
    cyclohexane to the soil in March-April should
    decrease the number of G, when they emerge
    from hibernation. -- A. P. Adrianov.

Card 3/3

VEVERKA, Antonin, prof. ham. di. a st.: dK, Aloi, m.s. G.; A.TATA, M.A., inz. BSc.

Experimental results on liquhart e in the cavity c — , . . us dielectric. El tech obrer 53 no. :480-485 S '64

L 15223-65   EEC(b)-2/EPF(c)/EPR/EPA(s)-2/EWP(j)/EWT(l)/EWT(m)/EEC(t)/T
Pc-4/Pl-4/Pr-4/Ps-4/Pt-10   IJP(c)   GG/RM/WW

ABSTRACT: Previous analyses of discharge processes in dielectric
cavities have been based upon the well-known capacitance model.
However, there are few experimental results to verify the theoretical
conclusions which follow from this model. The present study was
conducted on a homogeneous (non-laminated) dielectric with a single
cavity.   The objects were prepared from three plexiglass plates
7 x 7 cm in area and 0.7 mm thick, one of which contained an opening

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L 15223-65
ACCESSION NR: AP4044918

4.0, 5.0 or 7.0 mm in diameter. This plate was inserted between two
solid plates, and the three were joined together to form a sealed
cavity. The object was connected to aluminum-foil electrodes and
was fed from a high-voltage transformer. The experiments showed that
1) in the extreme case, the charge supplied by the source to the ob-
ject with the sealed cavity after discharge in the cavity is associ-
ated with the complete discharge of the opposite surfaces of the
cavity; and 2) the charge supplied by the source to the laminated
object after discharge approaches, in the extreme case, double the
value of the charge supplied at complete discharges of the opposite
surfaces of the cavity. Orig. art. has: 18 figures and 33 formulas.

ASSOCIATION: none

SUBMITTED: 00

SUB CODE: EM, ME   NO REF SOV: 000   ENCL: 00

                                                  OTHER: 003

Card 2/2

SHEHU, I.; GOSHI, N.

SHEHU, I.; GOSHI, N.   Good use of machinery. p. 21.

Vol. 9, No. 12, Dec. 1955, PER BUJQESINE SOCIALISTE, Tirane, Albania.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 10, Oct. 1956.

Reports on the achievements of the first Five-Year Plan and direc-
tives for the second Five-Year plan on economic and cultural
development of Albania, p.8, PER BUJQESIRE SOCIALISTE. (Ministrie
e Bujqesise) Tirane. Vol. 10, No.6, June 1956

Source: East European Accessions List. (EEAL) Library of Congress,
        Vol. 5, No. 12, December 1956

USHKO, D.A.; SHEIDER, u.F.

Stratigraphy and correlation of Quaternary sediments in the central part of the northwestern Caspian Sea region. Trudy NILnefteguza no.13:54-67 '65.   (MIRA 18:9)

S/653/61/000/000/009/051
I060/I260

AUTHOR: Sheidman, I.Yu.

TITLE: Plastic materials in foreign aviation technique

SOURCE: Plastmassy v mashinostroyenii i priborostroyenii. Pervaya
respublikanskaya nauchno-tekhnicheskaya konferentsiya
po voprosam primeneniya plastmass v mashinostroyenii i
priborostroyenii, Kiev, 1959. Kiev, Gostekhizdat, 1961, 85-94

TEXT: High mechanical strength, thermal and chemical stabili-
ty, required of various parts of supersonic planes and rockets, led
to development of reinforced plastics, foam plastics, transparent, and
chemically stable plastics. The article describes mechanical and ther-
mal properties of reinforced glass fibers and fabrics, and of quartz
fabrics developed by foreign aviation industry. In particular are
mentioned the asbestos plastics of "Raibestos", "Dilecto" and "Celeron"
of Continental Daynami Fiber, Astrolite of Thomson Fiber Glass, and

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Plastic materials in....

British Refrasil. Author mentions various types of foam plastics
based on polystyrene, polyvinylchloride, phenol-formaldehyde, phenol-
synthetic rubber etc., as well as the new polyurethane and silicoorga-
nic polymers like moltoprene and porolan. Polymethylmethacrylate
plasticized by dibutylphthalate are used for windows in planes. Chlo-
rinated polyethylene and fluoroplasts are used for parts which have
to resist the aggressive activity of oxidants. There are 2 figures
and 3 tables.

Card 2/2

TOSHKOV, As.; SHEIKOVA, G.

Effect of chlortetracycline on the fixation activity of the reticu-
loendothelial system in mice. III. Izv. mikrobiol. inst. (Sofia) 13:
65-71 '61.

(CHLORTETRACYCLINE pharmacol)
(RETICULOENDOTHELIAL SYSTEM pharmacol)

BULGARIA

As. TOMKOV, M. CHEIKOVA and D. STRAKHILOV, NIEM [Nauchen Institut po
epidemiologiya i microbiologiya, Scientific Institute for Epidemiology
and Microbiology] and VLh [Abbreviation not identified] Military
Hospital (Voenna bolnitsa pri NR). Direktor (director) of NIEM W.
KALAIDZHIEV; Head (nachalnik) of Military Hospital T. IVANOV.

"Studies With Penicillin-Resistant Staphylococci."

Sofia, Eksperimentalna Meditsina i Morfologiya, Vol 1, No 3, 1962;
pp 27-31.

Abstract [English summary modified]: Study of 37 of penicillin-resistant
and 28 sensitive Staph. aureus strains, all clinical coagulase-positive
isolates: type of hemolysis, fibrinolysis, phospharase, catalase,
mannita, gelatine, egg yolk, pigment formation, dehydrogenase,
necrotizing property. Results lead to conclusion that penicillin
resistance acquisition is correlated with complex changes of the
enzymatic activity as well as pathogenicity regardless of the presence
of the antibiotic. Three tables. 2 Bulgarian and 3 Western refs.
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